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ABSTRACT

Following a discussion of the differences between oral and written speech, this paper examines the act of reading written speech and the role that contextual information plays in reading comprehension. It notes the interaction that occurs between reader and text, points out the way in which written language makes demands upon readers' extralinguistic information, presents H. P. Grice's Cooperative Principles regarding ways a speaker (writer) is expected to cooperate with a listener (reader), and explains the "Given-New Contract" of Herb Clark and Susan Haviland, which governs the way in which speakers present information that listeners do or do not know. It then demonstrates that textbook content has a Given-New pattern and reports the results of a study that revealed that both IQ and knowledge of concepts assumed by a textbook passage to be Given information correlated significantly with reading comprehension. The paper concludes from the study that reading comprehension is dependent not merely on the text but on the transaction that occurs as a result of reader information meeting author information, and it reports on other research providing evidence for this conclusion. It also notes the differences between "real" reading comprehension (a thinking transaction with a passage) and "unreal" reading comprehension (a literal level translation) and urges secondary teachers to teach reading as a thinking process and to set purposes for reading. (GT)

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Contextual Information and Reading Comprehension

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Running head: Contextual Information

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The original title for this paper, the one appearing in your program, was 'Oral Language, Written Language, the Given-New Contract and Reading Comprehension'. Earlier in the year as I outlined the talk I felt it would be useful to focus on examining the relations between oral speech and written speech and from such an examination, draw implications for reading comprehension, for learning to read and for the teaching of reading.

Writing is, in fact, a form of speech having its own special requirements. Functionally, the chief distinction between oral and written speech is the presence or absence of a definite situational context. Oral speech takes place in a situation that provides abundant non-linguistic clues in addition to the linguistic ones. Speakers know this, listeners know this and both take advantage of the fact. In contrast, written speech normally attains meaning (i.e., is read) only when removed in time and space from its author. This places constraints on the writer different from those under which the speaker operates. Similarly must the reader, as compared with the listener, function in a different circumstance.

We need only read written transcripts of genuine oral speech (not literary dialogue) to realize that they are frequently unintelligible, not only in nuance of application, but in plain sense. No wonder, then, that the judiciary committee was not satisfied with merely the transcripts of Mr. Nixon's tapes. Intonation and timing, cues essential to understanding oral speech, were absent from them. Of course, the careful writer attempts to build such factors into his/her written text, but such is the craft of constructing written language, not the nature of the medium itself. Certainly the two modes of language share many common features, but in order to secure meaning writing often employs

special techniques not normally required in oral speech.

Nor is it a simple case of saying X is written speech and Y is oral speech. Rather there are continuous gradations in these relations. (And the more I discover about language, the more I am convinced that continuous gradations are essential to describing language and language use. Neat little self-contained categories do not work.) So writing may be used in circumstances which approximate everyday oral speech. Imagine two people here in our audience. They're both listening to what I'm saying and twenty minutes from now one passes a piece of paper to the other on which is written the word nonsense. The meaning is just as secure in that situation as it would have been were the word whispered from one to the other. As another illustration of how writing is, many times, essentially 'speech written down', consider an example, borrowed from E.D. Hirsch:

> A wife leaves a note for her husband: It reads 'Don't forget the pen'. He knows that he is supposed to buy a particular fountain pen at a particular shop, and the words could just as well have been spoken. But if the same message had been left by a farmer's wife, the farmer might have been reminded that he was to repair his pig pen that day. The potential ambiguity of the written message was removed because it appears in relation to a particular [situation as is usually the case for oral speech] (Hirsch, in press).

Conversely, oral speech may be employed in situations like those with which the writer finds himself faced. Again, borrowing from Hirsch (in press): Editors of the BBC magazine Listener report that some interviews with articulate persons require little editing before their publication in print. Rightly should it be, because the audience for such a radio broadcast is an absent, hypothetical one. This 'oral' speech situation closely approximates the context in which an author normally operates.

Perhaps now you're analyzing what I'm saying. Which characteristics of oral speech does this kind of talk contain? Which of written speech? Were you to read the actual text, what meaning would you be able to obtain from it? If you were to edit it for publication as an article (rather than as a transcript of the talk, what changes would you make? These and other related questions get to the qualities which mark oral and written speech. Knowing what is demanded of readers, listeners, speakers and writers and understanding how these different processes of communication relate to each other can help us as teachers of reading and writing and language to structure appropriate learning experiences. Thus, I believed when I drafted this paper that knowledge of such characteristics and relations is potentially very efficacious, and I continue to believe that quite strongly.

All this is a rather long prelude which will serve as background for what I say in the remaining time. Today I am not going to focus upon the relations between the two modes of communication, oral and written speech. Yet I feel this bit of background will help you to see the context out of which today's talk has arisen. And by the time we're through, I would hope you'll know why I think such context important. I believe you'll see the links and implications of the introduction to what follows and how it ultimately becomes impossible to separate those notions from what I shall discuss. Specifically, I'd like to turn attention to written speech; more specifically to the act of reading written speech (though I believe what I shall say has indirect, if not direct implications for writing and teaching writing).

I have become increasingly intrigued with the role that contextual information plays in reading comprehension, and it is the role of this factor that I would like to examine. By contextual information I do not mean linguistic context, how the occurrence of one word syntactically

and semantically influences other words within that sentence; no, Goodman and Smith have already explicated that quite nicely, thank you. Rather, I'm speaking of the contextual information involved in the total act of reading, viz., of comprehending written speech. The text itself contains information encoded by the author in particular ways; the reader also possesses information, encoded according to his/her unique cognitive schema. It is the meeting of these two 'minds' on a conceptual basis, i.e., in terms of a sharing of information, that constitutes my version of context.

Reading has been defined as a thinking process, as an active search for meaning, as thinking in the context of print, or in Louise Rosenblatt's terms, as a transaction between reader and text (Rosenblatt, 1972). This notion of transaction seems to get to the heart of reading. Real reading, not just word calling involves the reader in an ongoing process. The reader and the text (or author) are aspects of a total communicative situation. A person becomes a reader by virtue of his/her activity in relation to a text. That is to say, factors emanating from the author as well as factors contained within the reader influence comprehension. Or as Marie Clay put it this morning, the child's contribution to the reading process is of paramount importance. One of these factors emanating from the reader is contextual information, or knowledge structures. <u>What</u> the reader knows and <u>how</u> he knows it play an important part in comprehension, precisely because reading is a transactional process. In many ways the reader's extra-linguistic knowledge is necessary for adequate and meaningful processing of linguistic information in texts.

I'd like to discuss several ways in which this notion of contextual prerequisites affects understanding in reading. We shall examine the way in which written language like that of school textbooks and basal

readers makes particular kinds of demands upon students' extra-linguistic information, demands about which all teachers, not only reading teachers, should be aware. Then we shall draw implications from these results regarding teaching strategies.

Through psychological research into oral communication I found a means of investigating the reader's use of information, that is, contextual information, in the process of reading. Let us begin with H.P. Grice (1975) for it is in his ideas that two of my psychologists, Herb Clark and Susan Haviland, find their philosophical underpinnings. In Grice's article 'Logic and Conversation', he argues that speakers and listeners are involved in a cooperative enterprise and that they engage in a type of social contract he calls the Cooperative Principle.

That is, the speaker is expected to be cooperative in four general ways which Grice represents as maxims. The maxims are these:

COOPERATIVE PRINCIPLE

1. Maxim of Quantity: Make your contribution no more and no less informative than is required.
2. Maxim of Quality: Say only that which you both believe and have adequate evidence for.
3. Maxim of Relation: Be relevant.
4. Maxim of Manner: Make your contribution easy to understand; avoid ambiguity, obscurity and prolixity.

Adherence to these maxims facilitates the communicative process. Of course, the speaker could violate one of these maxims without violating the Cooperative Principle and thus achieve a special kind of communication. For example, if you and I both knew that it was raining outside and I said "Another beautiful day", I would have violated the Maxim of Quality, yet you would have understood perfectly well that I

did not think it a beautiful day but was violating the maxim intentionally and thus making an ironic comment on the weather.

But unintentional violations lead to breakdowns in communication. Suppose that it was raining but that you had not yet looked outside to see what kind of day it was, and I said, "Another beautiful day". You would assume that as a speaker I was being cooperative and that it was, in fact, another beautiful day rather than another typical Melbourne day.

There is much more to Grice's notion of the logic of conversation, and this terse synopsis does not do it justice. I commend him to you and move us on to Haviland and Clark.

Relating to Grice's Maxim of Manner is a specific facet of the compact between speaker and listener, the Given-New Contract. It is this Given-New Contract which Clark and Haviland have put forth. They maintain that it is another type of social contract, one which plays a central role in interpreting sentences in English. By placing information as either Given or New in a sentence, the speaker is engaging in the Cooperative Principle. He assumes that he and the listener have an implicit agreement regarding how presupposed and novel information should appear in sentences. The Given-New Contract consists of one maxim, the Maxim of Antecedence:

GIVEN-NEW CONTRACT

Maxim of Antecedence: Try to construct your utterance such that the listener has one and only one direct Antecedent for any Given information and that it is the intended Antecedent.

By adhering to the Maxim of Antecedence the speaker assumes the listener has certain information and does not have other information. Given information is information the speaker assumes the listener knows

previous to the speaker's uttering a sentence. New information, on the other hand, is information the speaker assumes the listener does not know previous to the speaker's uttering a sentence.

The following are examples of how the Given-New strategy applies to particular sentences.

1. It was Ian who kissed Mary.
   G: Someone kissed Mary.
   N: That person was Ian.

2. What Ian did was kiss a girl.
   G: Ian did something.
   N: That something was kiss a girl.

The speaker of sentence 1. presupposes that the listener already knows that someone kissed Mary. Thus, that "someone kissed Mary" is Given information. The New information that is being delivered is that the person who did the deed is Ian.

Sentence 2. is a bit different. Here the speaker presupposes that his listener knows that Ian did something. The New information the speaker is supplying is what that something was.

Such use of Given and New information fits into the structure of oral discourse. When a listener does not have the Given information the speaker believes he has, the listener generally asks the speaker to rephrase his utterance or back up a step. For example, if right now I began a conversation with you by saying, "The match was postponed because of rain", you might legitimately ask "What match?" The way I encoded that information presupposed that you knew what match; that is, it made <u>match</u> a bit of Given information. If, in reality, it is not Given information for you, a breakdown in communication occurs. Thus,

comprehending in discourse is a case of relating the ideas of the speaker to one's prior knowledge.

Of course, just as with the other maxims of the Cooperative Principle, one can violate the Maxim of Antecedence without violating the Principle itself and thereby convey a subtle or different kind of meaning. Take these two sentences:

Jim is a used car salesman.

Tony can't be trusted either.

In the sentence 'Tony can't be trusted either', the listener has no direct antecedent. However, I'm sure you see the connection which the speaker intends and the listener can make.

Clark and Haviland argue that speakers and listeners use this Given-New strategy in producing and comprehending discourse, and they provide linguistic and psychological evidence to support their claims. I refer you to their paper "Psychological Processes as Linguistic Explanation" (Clark and Haviland, 1974) for the details.

All of this is fine, you say, but what has it to do with reading? It seemed to me likely that a similar phenomenon occurred in reading - not exactly the same thing of course, because as I maintained earlier, the difference in situational constraints between oral speech and written speech results in several differences in the two media. Remember that Clark and Haviland focus attention on how Given and New information is deployed in sentences. Sentences in written language also have a definite Given-New pattern; however, because written speech tends to be connected, sequential discourse (rather than spontaneously developing discourse as oral speech is), the important factor in something like a chapter from a textbook is not what the author assumes to be Given and

New for the sentences but what the author assumes to be Given and New for the chapter as a whole, i.e. the contextual information of that passage. Any author must assume his/her reader to have a certain level of conceptual knowledge about the topic in question (even if that conceptual knowledge is next to nil). These assumptions are necessary for the author to be able to plan how to write the particular text. And furthermore, the reader uses prior knowledge to comprehend what the writer is saying.

To demonstrate this principle, imagine a chapter on the immune system from a form V or VI biology textbook. What concepts would the author assume to be Given, that is, that the reader would know previous to reading the passage? Perhaps the concept of cell. What would be New information? Likely the concept of antibody (structure); of cell response in the immune system; the concept of antigen, etc.

Now imagine a book on that same topic written for a graduate student in microbiology. What would be the Given information in this case? It is probable that the author would assume the reader knew all of the foregoing information. That is, the author would structure the text on the premise that the reader not only had conceptual knowledge of a cell but also that he also understood the clonal hypothesis, the antibody molecule, antibody-antigen binding, etc. The New information in this case might be the specific mechanisms of how T and B cells collaborate.

This latter text we would expect to be nigh incomprehensible to the form V-VI reader. Why? Part of the answer is because he doesn't have as Given what the author assumed he had. He may be able to pronounce all of the words quite well, employing proper intonation and inflection. Furthermore, he might even be able to give a dictionary definition for

all of the words. But if he did not have conceptual knowledge of the Given information (if he were not able to apply, analyze, synthesize and evaluate that information), if he could not relate the ideas from the text to what he already knew, the chance that he would comprehend would be slim. In the case of the Form V or VI student, the reader's contextual information and what the author assumed to be his reader's contextual information do not match closely enough to permit transaction between reader and writer. And such transaction is necessary, for readers do not simply decode and store the meanings of sentences per se. Rather readers create semantic products that are a joint function of information from text and prior knowledge. Thus, the match between Given information of text and prior knowledge of the reader is important. The reader needs a framework which permits him to interpret the new information of text; his knowledge of Given information can help provide such a framework.

To test the hypothesis that one's knowledge of the Given information of a selection correlates with one's reading comprehension on that selection, I chose a passage like one typically found in a history, social studies or geography text. The passage described the physical, occupational, economic and political conditions on a particular island. This passage was then analyzed sentence by sentence according to Clark and Haviland's guidelines with the appropriate modifications made to account for the fact that the bits of Given information were from written, not oral speech. Next, the Given information for the passage as a whole was determined by analyzing the interaction of the particular sentences and finding any information which appeared originally as Given in the passage. Finally, this Given information for the passage as a whole was analyzed to determine what concepts the author assumed the reader knew prior to reading the text. There were four such concepts:

CONCEPTS

1. The effect of physical factors of a location upon occupations in that location.
2. Import-export systems.
3. Government which (1) answers to the will of the majority and (2) has a governing body.
4. Ecological balance.

A test was devised that would measure the reader's knowledge of these concepts. The test sampled all of Bloom's levels of cognitive knowledge for each concept.

96 students were involved in the experiment, 32 each at Forms II, IV and VI. Half the students at each grade level took the test of Given information first, then read the passage and finally took a reading comprehension test on the passage. The other half read the passage, took the comprehension test, and then took the Given information test. The correlational results are shown in Table 1.

FIRST ORDER CORRELATIONS AMONG VARIABLES

GRADE 8/Form II				
	COMP	IQ	KNOWGIV	
IQ	.55**			
KNOWGIV	.58**	.45**		N = 32
ORDER	.03	-.07	-.12	
GRADE 10/Form 1V				
	COMP	IQ	KNOWGIV	
IQ	.45**			
KNOWGIV	.54**	.35*		N = 32
ORDER	-.06	-.31	-.24	
GRADE 12/Form VI				
	COMP	IQ	KNOWGIV	
IQ	.58**			
KNOWGIV	.53**	.49**		N = 32
ORDER	-.05	-.09	-.16	
ALL GRADES				
	COMP	IQ	KNOWGIV	
IQ	.52**			
KNOWGIV	.57**	.42**		N = 96
GRADE	.14	-.05	.27*	
ORDER	-.02	-.09	-.17	-.02

*p < .05 **p < .01

IQ is intelligence quotient as measured by the Otis-Lennon mental ability test. IQ is included because I wanted to see if, in fact, knowledge of the Given information of a passage is correlated with reading comprehension and that this factor was not merely the same thing as IQ. KNOWGIV stands for the reader's knowledge of Given information for the passage used. ORDER refers to the order in which Ss completed the three tasks outlined above.

Note that at all grade levels both IQ and KNOWGIV correlated significantly with reading comprehension. To determine if the correlation shown for KNOWGIV were only the result of an interaction with IQ, a hierarchical linear multiple regression was performed. In other words, the incremental contribution of KNOWGIV after IQ had been introduced

into the equation was examined.

Table 2 shows that one's knowledge of Given information makes a significant contribution to the explanation of the variance in reading comprehension even when IQ is taken into account.

SUMMARY TABLE FOR REGRESSION OF IQ AND KNOWGIV ON COMP

GRADE/ FORM	VARIABLE	MULTIPLE R	R^2	R^2 CHANGE	F
8/11	IQ	.55	.30	.30	15.54**
	KNOWGIV	.66	.44	.14	7.25*
10/IV	IQ	.45	.20	.20	9.21**
	KNOWGIV	.61	.37	.17	7.83**
12/VI	IQ	.58	.34	.34	16.71**
	KNOWGIV	.64	.42	.08	4.00
ALL LEVELS	IQ	.52	.27	.27	42.83**
	KNOWGIV	.65	.42	.15	23.79**

*p < .05
**p < .01

Thus, the reader's comprehension is not dependent merely on the text itself. Rather the transaction which occurs as a result of reader's information meeting author's information is what determines comprehension. These findings in themselves have several implications for reading and content area teachers. However, the significance in terms of knowledge of Given information only partly describes how important the notion of comprehension as transaction between reader and text is.

Let's take a whirlwind tour of some other research which provides additional evidence for reading comprehension as being dependent not only on what the reader sees, but also on the implications of this information in light of the relevant knowledge he already possesses.

Note the following passage: 15

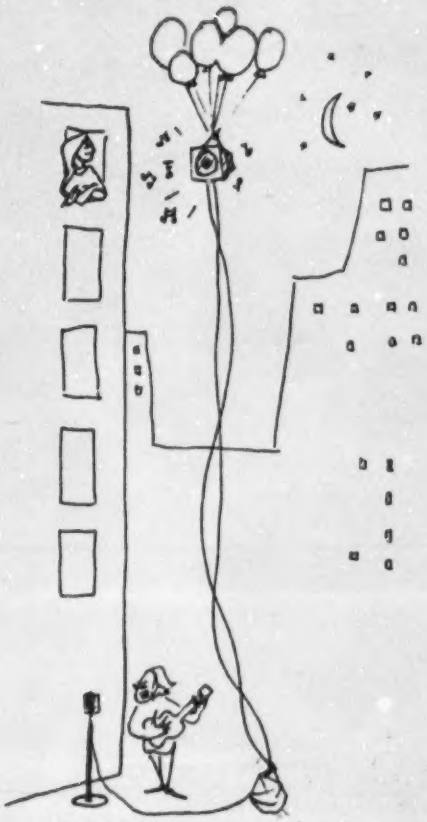
> With hocked gems financing him our hero bravely defied all scornful laughter that tried to prevent his scheme. "Your eyes deceive", he had said. "An egg not a table correctly typifies this unexplored planet". Now three sturdy sisters sought proof, forging along sometimes through calm vastness yet more often over turbulent peaks and valleys. Days became weeks as many doubters spread fearful rumors about the edge. At last from nowhere welcome winged creatures appeared signifying momentous success.

Dooling and Lachman (1971) presented this passage to 120 subjects and then measured their recall of it. How well do you think you would do on such a test? How well do you think you would do in comparison if I first gave you this title: "Christopher Columbus Discovering America"? Dooling and Lachman found that presentation of such a title prior to reading passages like this one significantly facilitated recall.

Keep that in mind as we look at a passage typical of the ones Bransford and Johnson (1972) gave their subjects.

> If the balloons popped, the sound wouldn't be able to carry since everything would be too far away from the correct floor. A closed window would also prevent the sound from carrying, since most buildings tend to be well insulated. Since the whole operation depends on a steady flow of electricity, a break in the middle of the wire would also cause problems. Of course, the fellow could shout, but the human voice is not loud enough to carry that far. An additional problem is that a string could break on the instrument. Then there could be no accompaniment to the message. It is clear that the best situation would involve less distance. Then there would be fewer potential problems. With face to face contact, the least number of things could go wrong.

How many ideas do you think you could recall after reading that one? Bransford and Johnson found that <u>their</u> subjects recalled significantly more ideas if they were shown something like this before the passage.



From Bransford and Johnson (1972), p.718.

In yet another experiment Jay Sherman (1976) used passages adapted from those Dooling and Lachman employed. He provided students with different types of contexts - verbal and non-verbal - prior to reading. He found that subjects having some kind of context recalled significantly more idea units than those having no context.

To me, all the studies we have talked about say a number of things. First, they support the contention that reading is a transactional rather than a one-way process. Secondly, they demonstrate that the degree of reading comprehension depends substantially upon the contextual information possessed by the reader.

Just one more example to add another dimension to the role context can play in reading comprehension (though this example doesn't work quite so well here as it does in the U.S.). 17

> Rocky slowly got up from the mat, planning his escape. He hesitated a moment and thought. Things were not going well. What bothered him most was being held. Especially since the charge against him had been weak. He considered his present situation. The lock that held him was strong but he thought he could break it. He knew, however, that his timing would have to be perfect. Rocky was aware that it was because of his early roughness that he had been penalized so severely -- much too severely from his point of view. The situation was becoming frustrating; the pressure had been grinding on him for too long. He was being ridden unmercifully. Rocky was getting angry now. He felt he was ready to make his move. He knew that his success or failure would depend on what he did in the next few seconds.

How many of you felt that this was a passage about a person planning an escape from prison or some other place in which he was being held? Most people interpret it as such. In addition a fair percentage of Americans interpret that passage as being about a wrestler trying to break an opponent's hold. Dick Anderson (1976) gave subjects this and another passage like it which is usually interpreted as a group of people playing cards, though it can be viewed as a rehearsal of a woodwind ensemble. The subjects were both physical education students (who were either wrestlers or familiar with wrestling) and music education students. The physical education students gave a wrestling interpretation to the Rocky passage 64% of the time; music students did so 28% of the time. The other passage was given a woodwind rehearsal interpretation 29% of the time by physical education students and 71% of the time by music education students.

Previously we saw that contextual information can affect the degree of comprehension. Anderson's experiments demonstrate that not only the degree but also the nature of comprehension can be affected by one's cognitive schemata. There are many other related studies on discourse comprehension, and I wager that each of us has a personal anecdote to support empirical findings such as the ones mentioned. Let me just make some overall conclusions.

As I noted before, I think we have overwhelming evidence that real reading is a transaction between reader and text. Words and sentences do not 'have' meanings. Rather, the reader, on the one hand, and the words and sentences, on the other, are "aspects of a total situation in an ongoing process. Thus, a known assumes a knower and vice-versa. (The) knowing (i.e. the comprehension), is a transaction between individual (and text)" (Rosenblatt, 1972).

Perhaps you noticed that I said real reading comprehension and are wondering what that means. I think that unreal reading comprehension results precisely because many people do view the text as an autonomous entity, as having meaning in and of itself. These are the behaviourists and their theory of comprehension attempts to explain reading in terms of concatenations of simple units. Thus, a Rudolf Flesch would define reading as "getting meaning from certain combinations of letters. Teach the child what each letter stands for and he can read" (Flesch, 1955). Such a view assumes that the role of the reader is to reproduce the text. An emphasis on reading as reproduction achieves just that - students reproduce the facts of a text. They operate essentially on the literal level. If this is the kind of reverence the teacher is seeking, the students soon learn the game. The result is not a thinking transaction with the passage but a literal level translation of it. This is unreal comprehension.

I hope I have demonstrated today that such a view of reading comprehension is not complete enough and thus it is highly suspect. The object of reading should not be to reproduce text but to understand it. To quote Dick Anderson again, "text is gobbledygook unless the reader possesses an interpretive framework to breathe meaning into it" (Anderson, 1976). One of the factors which helps a reader breathe meaning into a text is his use of contextual information. And this use

of contextual information is not some higher level reading skill. From the beginning reading is, and should be taught as, a thinking process. I am not saying that the use of context is the only or even the most important factor in comprehension. There is no panacea here - or anywhere for that matter. No, I maintain that it is one important and often neglected facet of a complex thinking operation. Perhaps if we viewed the text in Anderson's terms as "a cryptic recipe that can guide a person in constructing a representation", we would be able to place the role of the reader's use of contextual information in proper perspective.

One of the best books I have come across on reading was written in 1937 by a man named Ernest V. Horn. Its title is Methods of Instruction in the social studies. (Consider the idea of language and reading across the curriculum and note how far ahead of his time Horn was.) In Chapter V of that book Horn states,

> The author, moreover, does not really convey ideas to the reader; he merely stimulates him to construct them out of his own experience. If the concept is already in the reader's mind, the task is relatively easy, but if, as is usually the case in school, it is new to the reader, its construction more nearly approaches problem-solving than simple association.
> (Horn, 1937, 154.).

Regarding reading comprehension in school as a problem-solving situation helps us focus on two general aspects which should be of primary concern to teachers in their classroom practices. The first is the notion of reading as a thinking process; the other, role of pre-reading anticipation in reading. In this last phase I shall say a bit about each of these.

First, it is essential that from the beginning of reading instruction all the way through secondary school the teacher should create a

reading/learning situation that requires the reader to weigh ideas, to anticipate meanings and remember their consequences, to engage in reading with some purpose. In short, reading should always be a thinking thing. It is in this way that Marie Clay's idea of the child teaching himself comes to life (Clay, 1977).

The idea of purpose is particularly important in this regard. There are what have been termed primary and secondary purposes in reading. Primary purposes for reading include enjoyment, intellectual demands, vocational or avocational interests, and so forth. Such purposes are immensely important in reading; however, they do not have as direct a link with this idea of the reader's contextual information as do secondary purposes. Secondary purposes relate more to the reading of specific texts. In this case the individual has a reason for reading a certain story, article or book; that is, he has certain questions he wants answers for. These questions determine, or perhaps are, his purpose for reading the passage. Such purposes represent directional and motivating influences that get a reader started, keep him on course, and produce the push to carry him through to the end. What's more, purposes are the key to efficient reading. The efficient reader adjusts his rate and type of reading according to his purposes.

More and more I realize how necessary purpose is to comprehension. Certainly those who write about reading stress its importance. Russell Stauffer, William S. Gray, Arthur Gates, David Russell and many, many others have discussed the key part purpose plays in reading comprehension. Since George and Evelyn Spache are two of our keynote speakers, I quote from their book Reading in the Elementary School, "The purposes of the reader . . . determine the type or kind or degree of comprehension that he achieves. . . . Students who set strong purposes for their reading comprehend significantly better than those who set vague purposes" (p.557).

Setting purposes for reading encourages reading as a transactional process because setting purposes essentially involves the reader's asking questions. Furthermore, this process of formulating questions has its roots in the reader's contextual knowledge. A reader uses what he knows to hypothesize what might be in the passage. Thus, particularly for expository passages like those normally encountered in science, history or other content area textbooks, or like those scattered throughout basal reading schemes, the reader's knowledge of Given information becomes the basis for setting purposes. For example, when a student approaches a chapter entitled "Australian Nationhood" he should ask himself "What do I know about this topic?" "What do I know about nationalism, about bushrangers, about the federation movement, about the Tenterfield Oration, etc?" In such a manner he assesses his knowledge and from that, answers the question "What can I expect to learn from this chapter?" This latter question gets him anticipating, approaching reading as a problem-solving, thinking process. Of course, many readers do not bother to engage in any of this type of pre-reading anticipation; it is a facet of reading they have never learned. In such a case it becomes the teacher's task to help the student see that what he knows facilitates reading, that setting purposes based on prior knowledge guides reading and helps make it a worthwhile activity. We can no longer afford to be what Hal Herber (1970) calls "assumptive" teachers, assuming that students do employ such strategies in their reading. Rather, teachers need to create situations which challenge students to use their contextual information to hypothesize about a selection and then read to confirm, reject, or reformulate those hypotheses. Such a paradigm makes reading an intellectual rather than a mechanical activity. And as we have seen, a suitable organizational framework facilitates comprehension.

Of course, the best purposes for reading are formulated by the reader himself. However, initially (and I don't mean only in the primary school) the teacher will probably need to help students formulate purposes and then read to find answers to their questions. One of the best instructional strategies for achieving this is the Directed Reading-Thinking Activity, and it applies equally well to both narrative and expository passages. The most detailed accounts of the DRTA occur in Russell Stauffer's books. I recommend highly Directing The Reading-Thinking Process (1975) and Teaching Reading as a Thinking Process (1969).

We must realize that what students do before they read is likely to be as important to comprehension as what they do when they read. This notion of pre-reading anticipation is an oft-neglected facet of the reading process. Not only should we work on building interest in a selection, but also we must create situations where a thinking transaction between reader and text is likely to take place. It is time we stopped making reading something unnatural and started making it a situation in which communication takes place.

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